

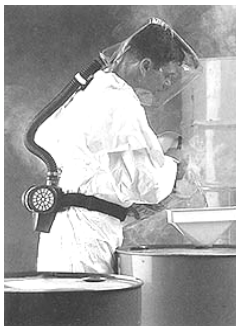
WORKING DRAFT

General

Name

ID# 34

Magnum 4000 P3, with Full Facemask



Technology

Powered respiratory system; uses internal cassette filter

Stock Number

TH3P/TM3P classification

Protection Type

Respiratory

Equipment Category

Respirator, powered

Availability

Not specified

Current User(s)

Not specified

Manufacturer

Martindale Centurion Safety Products Ltd.

Howlett Way

Thetford, Norfolk

England IP24 1HZ

+44 (0)1842 754266 (Tel)

+44 (0)1842 765590 (Fax)

Foreign

Manufacturer Type

Martindale Centurion Safety Products Ltd.

Developer

Martindale Centurion Safety

www.centurionsafety.co.uk

sales@centurionsafety.co.uk

MPS Mine and Process Service Inc.

Box 484

Kewanee, IL 61443

309-852-6529 (Tel)

309-854-5206 (Fax)

Certification

CE certified by B.S.I. to EN12941 TH3P and EN 12942 TM3P

Operational Parameters

Chemical Warfare (CW)

Not applicable

Agents Protected Against

Biological Warfare (BW)

Not applicable

Agents Protected Against

Toxic Industrial Materials

Will protect against TIMs of toxic dust when fitted with P3 filter

(TIMs) Protected Against

Duration of Protection

Up to 2 h

Recommended Use(s)

Not specified

Physical Parameters

Sizes Available

Not specified

Weight

Not specified

Package Size and Volume

Not specified

Power Requirements

Not specified

WORKING DRAFT

Material Type	Not specified
Construction Type	Not specified
Color	Not specified

Logistical Parameters

Ease of Use	Easily manageable, able to be worn for long periods with no effects
Consumables	Not specified
Maintenance Requirements	Not specified
Shelf Life	Not specified
Transportability	Not specified
Operational Limitations	Not limiting, has 75 % to 90 % visibility
Environmental Conditions	Protects in normal environments
Unit Cost	Less than or equal to \$500 per unit
Maintenance Cost	Not specified
Warranty	Not specified
Don/Doff Information	Not specified
Use/Reuse	Able to be cleaned and reused greater than 50 times
Laundryability	Not specified
Accessories	Not specified

Special Requirements

Training Requirements	Little to no training required
Training Available	Not specified
Manuals Available	Not specified
Surveillance Testing Requirements	Not specified
Support Equipment	Not specified
Testing Information	Not specified
Applicable Regulations	Not specified
Health Hazards	Not specified
Communications Interface Capability	Not specified
EOD Compatibility	Not specified

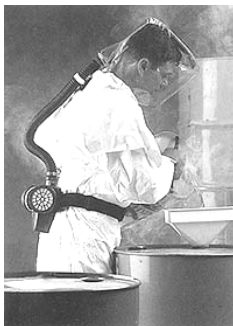
WORKING DRAFT

General

Name

ID# 35

Magnum 4500 P3, with Full Facemask



Technology

Powered respiratory system; fitted with DIN 40 thread for externally mounted screw threaded filter canister. Magnum 4500, P3 power unit for use with DIN 40 screw threaded filter canisters.

Stock Number

TH3P/TM3P classification

Protection Type

Respiratory

Equipment Category

Respirator, powered

Availability

Not specified

Current User(s)

Not specified

Manufacturer

Martindale Centurion Safety Products Ltd.

Howlett Way

Thetford, Norfolk

England IP24 1HZ

+44 (0)1842 754266 (Tel)

+44 (0)1842 765590 (Fax)

Not specified

Manufacturer Type

Martindale Centurion Safety Products Ltd.

Developer

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MPS Mine and Process Service Inc.

Box 484

Kewanee, IL 61443

309-852-6529 (Tel)

309-854-5206 (Fax)

CE certified by B.S.I. to EN12941 TH3P and EN 12942 TM3P

Certification

Operational Parameters

Chemical Warfare (CW)

Not applicable

Agents Protected Against

Biological Warfare (BW)

Not applicable

Agents Protected Against

Toxic Industrial Materials (TIMs) Protected Against

Will protect against TIMs of toxic dust when fitted with P3 filter

Duration of Protection

Up to 2 h

Recommended Use(s)

Not specified

Physical Parameters

Sizes Available

Not specified

Weight

Not specified

Package Size and Volume

Not specified

WORKING DRAFT

Power Requirements	Not specified
Material Type	Not specified
Construction Type	Not specified
Color	Not specified

Logistical Parameters

Ease of Use	Easily manageable, able to be worn for long periods with no effects
Consumables	Not specified
Maintenance Requirements	Not specified
Shelf Life	Not specified
Transportability	Not specified
Operational Limitations	Not limiting, has 75 % to 90 % visibility
Environmental Conditions	Protects in normal environments
Unit Cost	Less than or equal to \$500 per unit
Maintenance Cost	Not specified
Warranty	Not specified
Don/Doff Information	Not specified
Use/Reuse	Able to be cleaned and reused greater than 50 times
Launderability	Not specified
Accessories	Not specified

Special Requirements

Training Requirements	Little to no training required
Training Available	Not specified
Manuals Available	Not specified
Surveillance Testing Requirements	Not specified
Support Equipment	Not specified
Testing Information	Not specified
Applicable Regulations	Not specified
Health Hazards	Not specified
Communications Interface Capability	Not specified
EOD Compatibility	Not specified

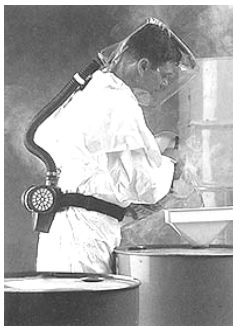
WORKING DRAFT

General

Name

ID# 36

Magnum 8000 P3, with Full Facemask



Technology

Powered respiratory system; uses internal cassette filter and can be used with P3 facemask. Magnum 8000, same as the 4000 but with audible and visual alarms for low battery or blocked filter.

Stock Number

Not specified

Protection Type

Respiratory

Equipment Category

Respirator, powered

Availability

Not specified

Current User(s)

Not specified

Manufacturer

Martindale Centurion Safety Products Ltd.

Howlett Way

Thetford, Norfolk

England IP24 1HZ

+44 (0)1842 754266 (Tel)

+44 (0)1842 765590 (Fax)

Foreign

Manufacturer Type

Martindale Centurion Safety Products Ltd.

Developer

Martindale Centurion Safety

www.centurionsafety.co.uk

sales@centurionsafety.co.uk

MPS Mine and Process Service Inc.

Box 484

Kewanee, IL 61443

309-852-6529 (Tel)

309-854-5206 (Fax)

CE certified by B.S.I. to EN12941 TH3P and EN 12942 TM3P

Certification

Operational Parameters

Chemical Warfare (CW)

Not applicable

Agents Protected Against

Biological Warfare (BW)

Not applicable

Agents Protected Against

Toxic Industrial Materials (TIMs) Protected Against

Will protect against TIMs of toxic dust when fitted with P3 filter

Duration of Protection

Up to 2 h

Recommended Use(s)

Not specified

Physical Parameters

Sizes Available

Not specified

Weight

Not specified

Package Size and Volume

Not specified

WORKING DRAFT

Power Requirements	Not specified
Material Type	Not specified
Construction Type	Not specified
Color	Not specified

Logistical Parameters

Ease of Use	Easily manageable, able to be worn for long periods with no effects
Consumables	Not specified
Maintenance Requirements	Not specified
Shelf Life	Not specified
Transportability	Not specified
Operational Limitations	Not limiting, has 75 % to 90 % visibility
Environmental Conditions	Protects in normal environments
Unit Cost	Less than or equal to \$500 per unit
Maintenance Cost	Not specified
Warranty	Not specified
Don/Doff Information	Not specified
Use/Reuse	Able to be cleaned and reused greater than 50 times
Launderability	Not specified
Accessories	Not specified

Special Requirements

Training Requirements	Little to no training required
Training Available	Not specified
Manuals Available	Not specified
Surveillance Testing Requirements	Not specified
Support Equipment	Not specified
Testing Information	Not specified
Applicable Regulations	Not specified
Health Hazards	Not specified
Communications Interface Capability	Not specified
EOD Compatibility	Not specified

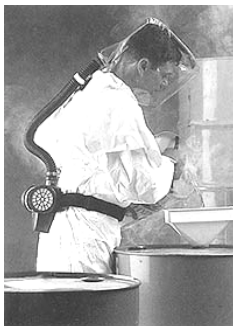
WORKING DRAFT

General

Name

ID# 37

Magnum 8500 P3, with Full Facemask



Technology

Powered respiratory system. Fitted with DIN 40 thread for externally mounted screw threaded filter canister. Magnum 8500, same as the 4500 but with alarms.

Stock Number

Not specified

Protection Type

Respiratory

Equipment Category

Respirator/powerd

Availability

Not specified

Current User(s)

Not specified

Manufacturer

Martindale Centurion Safety Products Ltd.

Howlett Way

Thetford, Norfolk

England IP24 1HZ

+44 (0)1842 754266 (Tel)

+44 (0)1842 765590 (Fax)

Not specified

Manufacturer Type

Developer

Martindale Centurion Safety Products Ltd.

Source

Martindale Centurion Safety

www.centurionsafety.co.uk

sales@centurionsafety.co.uk

MPS Mine and Process Service Inc.

Box 484

Kewanee, IL 61443

309-852-6529 (Tel)

309-854-5206 (Fax)

CE certified by B.S.I. to EN12941 TH3P and EN 12942 TM3P

Certification

Operational Parameters

Chemical Warfare (CW)

Not applicable

Agents Protected Against

Biological Warfare (BW)

Not applicable

Agents Protected Against

Toxic Industrial Materials (TIMs) Protected Against

Will protect against TIMs of toxic dust when fitted with P3 filter

Duration of Protection

Up to 2 h

Recommended Use(s)

Not specified

WORKING DRAFT

Physical Parameters

Sizes Available	Not specified
Weight	Not specified
Package Size and Volume	Not specified
Power Requirements	Not specified
Material Type	Not specified
Construction Type	Not specified
Color	Not specified

Logistical Parameters

Ease of Use	Easily manageable, able to be worn for long periods with no effects
Consumables	Not specified
Maintenance Requirements	Not specified
Shelf Life	Not specified
Transportability	Not specified
Operational Limitations	Not limiting, has 75 % to 90 % visibility
Environmental Conditions	Protects in normal environments
Unit Cost	Less than or equal to \$500 per unit
Maintenance Cost	Not specified
Warranty	Not specified
Don/Doff Information	Not specified
Use/Reuse	Able to be cleaned and reused greater than 50 times
Launderability	Not specified
Accessories	Not specified

Special Requirements

Training Requirements	Little to no training required
Training Available	Not specified
Manuals Available	Not specified
Surveillance Testing Requirements	Not specified
Support Equipment	Not specified
Testing Information	Not specified
Applicable Regulations	Not specified
Health Hazards	Not specified
Communications Interface Capability	Not specified
EOD Compatibility	Not specified

WORKING DRAFT

General

Name

ID# 38

9 mtr Unpowered Fresh-Air Hose System



Technology

Hose system; fresh-air supply equipment. CE approved to EN138, Class 2, powered fresh-air system allows the wearer to operate in a confined area for longer periods than unpowered equipment permits, or to do heavier tasks, including work in dangerous or toxic areas which may be deficient in oxygen. Utilizing the same full facemask, waist-mounted hose coupling and 9 m hose, as the unpowered system, the Mini Turbine powered system has a twin hose for fitting on the facemask incorporating an overflow valve to allow excessive air to escape. The intake strainer at the end of the unpowered hose is removed and attached to the powered Mini Turbine and is then connected to an electrical supply. Alternative powered hoses are available from 10 m to 40 m in length. The Mini Turbine, which can be placed up to 40 m from the contaminated area, draws air from the immediate vicinity through a coarse, washable sponge filter and delivers air through a hose to one or two users.

Stock Number

TH3P/TM3P classification

Protection Type

Respiratory

Equipment Category

Hose system; fresh-air supply equipment

Availability

Not specified

Current User(s)

Not specified

Manufacturer

Martindale Centurion Safety Products Ltd.
Howlett Way
Thetford, Norfolk
England IP24 1Hz
+44 (0)1842 754266 (Tel)
+44 (0)1842 765590 (Fax)
Foreign

Manufacturer Type

Martindale Centurion Safety Products Ltd.

Developer

Martindale Centurion Safety

Source

www.centurionsafety.co.uk
sales@centurionsafety.co.uk
MPS Mine and Process Service Inc.
Box 484
Kewanee, IL 61443
309-852-6529 (Tel)
309-854-5206 (Fax)
CE certified to EN138 TH3P Class 2 by B.S.

Certification

Operational Parameters

Chemical Warfare (CW)

Not applicable

Agents Protected Against

WORKING DRAFT

Biological Warfare (BW)	Not applicable
Agents Protected Against	
Toxic Industrial Materials (TIMs) Protected Against	Will protect against TIMs of toxic dust when fitted with P3 filter; will protect against certain levels of gas
Duration of Protection	Up to 2 h
Recommended Use(s)	Not specified

Physical Parameters

Sizes Available	Not specified
Weight	Not specified
Package Size and Volume	Not specified
Power Requirements	Not specified
Material Type	Not specified
Construction Type	Not specified
Color	Not specified

Logistical Parameters

Ease of Use	Easily manageable, able to be worn for long periods with no effects
Consumables	Not specified
Maintenance Requirements	Not specified
Shelf Life	Not specified
Transportability	Not specified
Operational Limitations	Not limiting, has 75 % to 90 % visibility
Environmental Conditions	Protects in normal environments
Unit Cost	Less than or equal to \$500 per unit
Maintenance Cost	Not specified
Warranty	Not specified
Don/Doff Information	Not specified
Use/Reuse	Able to be cleaned and reused greater than 50 times
Launderability	Not specified
Accessories	Not specified

Special Requirements

Training Requirements	Little to no training required
Training Available	Not specified
Manuals Available	Not specified
Surveillance Testing Requirements	Not specified
Support Equipment	Not specified
Testing Information	Not specified
Applicable Regulations	Not specified
Health Hazards	Not specified
Communications Interface Capability	Not specified
EOD Compatibility	Not specified

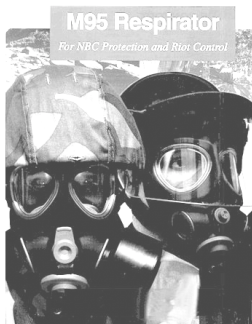
WORKING DRAFT

General

Name

ID# 39

M95 Respirator NBC Protective Respirator



Technology

Halo-butyl rubber used for the facepiece is specially engineered to enhance resistance to all known chemical and biological warfare agents. Has an exceptionally high particle filtration capacity and efficiency. Is effective against both gases and vapors, due to its high chemisorption and physisorption capacity. Has a particularly low breathing resistance NBC respiratory protection equipped with both a drinking device and a speech diaphragm. Computer-aided design for outstanding anatomical accuracy. Anatomical accuracy means that the close fit of the M95 mask offers unmatched protection. Nominal protection factor is >10000.

Stock Number

Regular: M-40007-001

Small: M40009-001

Protection Type

Respiratory

Equipment Category

Respirator, NBC protective. Practical Design and Construction: excellent fit and user comfort are the result of computer-aided design (CAD). Anatomical accuracy of the design is based on a wealth of facial form data. Facepiece has filter connections on both sides in order to facilitate left- or right-handed operation. Spectacle frames for prescription lenses. Hoseless, leakproof drinking device; intake of liquid 250 ml/min.

Availability

Commercial

Current User(s)

Finnish Armed Services

Manufacturer

Micronel Safety
5703 Industry Lane
Frederick, MD 21704
301-624-5600 (Tel)
888-744-6462 (Tel)
301-624-5688 (Fax)

Manufacturer Type

Domestic

Developer

Micronel Safety

Source

Micronel Safety Brochure
Frank Schneider, VP of Sales
fshneider@micronelsafety.com
www.lifesafetysys.com

Certification

Not specified

Operational Parameters

Chemical Warfare (CW)

Agents Protected Against

Provides chemical warfare protection against agents like sarin, other nerve agents and mustard gas, cyanogen, arsine, and phosgene

Biological Warfare (BW)

Agents Protected Against

Provides protection against bacteria and viruses

WORKING DRAFT

Toxic Industrial Materials (TIMs) Protected Against

Provides protection against many toxic industrial chemicals, gases, organic gases and vapors, inorganic gases and vapors, e.g., chlorine, hydrogen cyanide, hydrogen sulphide; organic and inorganic acids, like formic acid, sulphur dioxide, hydrogen fluoride and hydrogen chloride. Also provides protection against radioactive and highly toxic particles and aerosols.

Duration of Protection

> 48 h against CW agents

Recommended Use(s)

Provides NBC protection and meets the most critical hazards and stresses encountered in combat situations

Physical Parameters

Sizes Available

Regular and small

Weight

500 g; with filter 720 g

Package Size and Volume

Dimensions of the filter: 3.5 in height, 4.3 in diameter, and 8.8 oz

Power Requirements

Not specified.

Material Type

Halo-butyl rubber used for the facepiece is specially engineered to enhance resistance to all known chemical and biological warfare agents. Silicone inner mask provides comfortable fit against the skin. All materials are tested to withstand demanding field operations. Elastic head harness is resistant to chemicals and aging. The filter canister is made from reinforced polyamide for high impact resistance. Excellent fire retardant properties.

Construction Type

Anatomical accuracy is based on facial-form data. Facepiece has filter connections on both sides in order to facilitate left- or right-handed operation. Spectacle frames for prescription lenses. Hoseless, and leakproof drinking device.

Color

Not specified.

Logistical Parameters

Ease of Use

Excellent fit and user comfort

Consumables

Micronel Safety NBC Filter

Maintenance Requirements

Maintenance is simple to learn because the design, including the vital exhalation valve, is easy to dismantle. Replacement of the valves can be done without aid of tools.

Shelf Life

20 yr

Transportability

Not specified

Operational Limitations

Due to extremely low breathing resistance, the M95 mask and filter are comfortable to wear even for long periods, without affecting user performance. Small inner mask reduces dead-space to a minimum (CO₂ content of the M95 mask is 0.7 %). Extremely wide field of vision; even downwards; due to the close-fitting design of the mask. The stretch properties of the polyester/Lycra head-harness enhance wearer comfort, particularly over long periods.

Environmental Conditions

Temperature range is from -58 °F to +150 °F. All materials are tested to withstand demanding field operations. Excellent fire retardant properties.

Unit Cost

\$325

Maintenance Cost

Not specified

Warranty

Not specified

Don/DoFF Information

Donning test: 10 s

Use/Reuse

Not specified

Launderability

Not specified

WORKING DRAFT

Accessories

Spectacle frames for prescription lenses. Hoseless, leakproof drinking device, and #8211; intake of liquid 250 ml/min. Replaceable parts are color-coded to highlight vital components. Easy-to-use drinking tube for ingestion of liquids. Stability of the facepiece is ensured by chin support. NBC mask M95 for NBC respiratory protection is equipped with both a drinking device and a speech diaphragm.

Special Requirements

Training Requirements

Products must be used only by qualified persons trained in their use and maintenance and in strict accordance with and adherence to detailed instructions and precautionary statements provided in instruction manual

Training Available

User manual with each product

Manuals Available

Surveillance Testing

Inspection of the valves can be carried out without the aid of tools

Requirements

Support Equipment

Micronel Safety NBC filter

Testing Information

Not specified

Applicable Regulations

Not specified

Health Hazards

Not specified

Communications Interface

Mask is compatible with communications devices. Speech diaphragm.

Capability

EOD Compatibility

Compatible with tactical equipment used in field operations, e.g., optical and communication devices or weapons as well as CWA protective clothing and safety helmets

WORKING DRAFT

General

Name

ID# 40

MSA Advantage 1000 CBA/RCA Full-Face Respirator



Technology

When the wearer inhales, contaminated air enters and flows through the cartridges, which remove the contaminants from the air stream, so the wearer breathes in clean fresh air. The Advantage 1000 Full-Face Respirator features a wrap-around flexible lens that offers a comfortable fit with increased vision. It weighs 40 % less than conventional full-face respirators and uses the same cartridges as the Advantage 200 Respirator.

Stock Number

Small: 813860
Medium: 813859
Large: 813861

Protection Type

Respiratory

Equipment Category

Respirator, full face

Availability

Commercially available

Current User(s)

Multiple cities, State governments, Federal agencies, etc.

Manufacturer

Mine Safety Appliances (MSA) Company
Defense Products Department
P.O. Box 428
Pittsburgh, PA 15230-0428

Manufacturer Type

Domestic

Developer

Mine Safety Appliances (MSA) Company

Source

Mine Safety Appliances (MSA) Company
POC: Evan K. Erickson
724-733-9274 (Tel)
724-733-8573 (Fax)
evan.erickson@msanet.com

Certification

NIOSH/MSHA-approved (no. TC-14G-0235) for protection against chloroacetophenone (CN), chlorobenzylidene (CS), P100 particulate efficiency level, and particulates

Operational Parameters

Chemical Warfare (CW)

Agents Protected Against

Effective against biological agents and chemical agents GA, GD, VX, Mustard and Lewisite. Full range of CW agents; nerve, blister, and choking. Canister contains ASZM-TEDA carbon (same carbon as the C2A1 canister).

Biological Warfare (BW)

Agents Protected Against

All known biological agents. Prefilter has the same level of protection as the C2A1 canister.

WORKING DRAFT

Toxic Industrial Materials (TIMs) Protected Against	CN, CS, P100 particulate efficiency level, and particulates. The canister has the same limitations as the C2A1, (i.e., not effective against ammonia).
Duration of Protection	Protection duration cannot be determined due to the indeterminable exposure
Recommended Use(s)	Riot control and response to terrorist incident
<u>Physical Parameters</u>	
Sizes Available	Small, medium, and large (adult) sizes available
Weight	1.5 lb
Package Size and Volume	10 in x 6 in x 6 in
Power Requirements	No power requirements for mask alone. ESP voice projection unit is available (requires a 9 V battery to operate).
Material Type	40 % lighter than conventional full-face respirators. Mask is constructed of semi-permeable materials (a natural/nitrile blend of rubber and a polyurethane lens). Not recommended for exposure to flames or high heat. The Advantage 1000 Respirator is constructed of super-soft Hycar rubber that provides the feel and comfort of silicone but with better permeation resistance. For exceptional fit, the facepiece is available in three sizes and has a unique in-turned lip seal that provides the best possible seal against a wide range of facial contours. The Advantage 1000 facepiece also features a distinctive, flexible urethane lens that is integrally bonded to the facepiece, eliminating the need for rigid lens retainers that cause unwanted pressure points.
Construction Type	The lens is chemically bonded to the mask. Flexible, one-piece polyurethane lens with wide field of vision is bonded to durable Hycar rubber facepiece.
Color	Lens is clear, and the mask is black.
<u>Logistical Parameters</u>	
Ease of Use	Fully elastic, six-point head harness promotes easy on-off, easy adjustment, no hair pulling. Dual-canister mount allows weapon sighting from either shoulder. Standard noseclip helps eliminate lens fogging.
Consumables	Cartridges are available with or without P100 (particulate protection): GMA P 100 Cartridge (organic vapor, P100) GME P 100 Cartridge (organic vapor, acid gases, ammonia, methylamine, formaldehyde, hydrogen fluoride, P100) GMB P 100 (acid gases, P100)
Maintenance Requirements	No service required, only periodic inspection and cleaning
Shelf Life	Mask has an indefinite shelf life if properly stored, canister has a 4 yr shelf life
Transportability	Fully transportable, can be carried on person in a belt mounted carrier
Operational Limitations	Product holds up well to type police/fire service/HAZMAT environments
Environmental Conditions	No different performance than other gas masks
Unit Cost	Masks with one canister \$115 on GSA, \$174 list Canisters (box of 6) \$122 on GSA, \$185 list
Maintenance Cost	None
Warranty	Standard commercial warranty
Don/Doff Information	No, donning can be performed by the individual
Use/Reuse	Mask can be deconned, replacement of canister is recommended
Launderability	Item is laundered, with no deterioration

WORKING DRAFT

Accessories

Standard equipment includes a speaking diaphragm for clear, short-range communications, and nose cup to reduce lens fogging. Additional accessories: ESP voice projection unit, clear and tinted outsert lenses, spectacle kit, butyl hood, and carrier.

Special Requirements

Training Requirements

Training requires quantitative/qualitative fit testing and initial donning instruction (<15 min) and periodic training

None, not that complicated

Training Available

User manual included with each mask

Manuals Available

Periodic inspection required

Surveillance Testing

Requirements

Fit test equipment, lens outsert, butyl-coated nylon hood, and carrier

Support Equipment

Available from MSA appears on data sheet 05-00-03

Testing Information

None

Applicable Regulations

None

Health Hazards

ESP communications system

Communications Interface

Capability

Not specified

EOD Compatibility

WORKING DRAFT

General

Name

ID# 41

MSA Advantage 1000 with GME-P100 Cartridges



Technology

Respirator; Gas Mask

Canister contains pleated HEPA filter to remove aerosols and solid particulates and an impregnated activated carbon bed to adsorb gases and liquid vapors

Stock Number

Small: 805414

Medium: 805408

Large: 805420

815366 GME-P100 cartridges (pair)

Protection Type

Respiratory

Equipment Category

Respirator, gas mask

Availability

Commercially available

Current User(s)

Multiple cities, State governments, Federal agencies, etc.

Manufacturer

Mine Safety Appliances (MSA) Company

Defense Products Department

P.O. Box 428

Pittsburgh, PA 15230-0428

Manufacturer Type

Domestic

Developer

Mine Safety Appliances (MSA) Company

Source

Mine Safety Appliances (MSA) Company

POC: Evan K. Erickson

724-733-9274 (Tel)

724-733-8573 (Fax)

evan.erickson@msanet.com

Certification

Product is NIOSH-approved for all industrial chemicals.

Millennium used standard 40 mm thread size so have option of using NATO-style gas mask canister (however, NIOSH certification valid only with Millennium canister).

Operational Parameters

Chemical Warfare (CW)

Effective against nerve and blister agent groups. Tested using the CASHPAC protocol.

Agents Protected Against

Biological Warfare (BW)

All known biological agents. Prefilter has the same level of protection as the C2A1 canister.

Agents Protected Against

Toxic Industrial Materials

The respirator has NIOSH approvals for all industrial chemical groups

(TIMs) Protected Against

Duration of Protection

Exceeds the 8 h requirements of the NIOSH protocols

Recommended Use(s)

Protection against TIMs

WORKING DRAFT

Physical Parameters

Sizes Available	Small, medium, and large (adult) sizes available
Weight	1.8 lb
Package Size and Volume	10 in x 6 in x 6 in
Power Requirements	No power requirements for mask alone. ESP voice projection unit is available (requires a 9 V battery to operate).
Material Type	Mask is constructed of semi-permeable materials (a natural/nitrile blend of rubber and a polyurethane lens). Not recommended for exposure to flames or high heat.
Construction Type	The lens is chemically bonded to the mask
Color	Lens is clear, and the mask is black

Logistical Parameters

Ease of Use	Advantage 1000 is as functional as, if not better, than any other gas mask
Consumables	Cartridges are available with or without P100 (particulate protection): GMA P 100 Cartridge (organic vapor, P100) GME P 100 Cartridge (organic vapor, acid gases, ammonia, methylamine, formaldehyde, hydrogen fluoride, and P100) GMB P 100 (acid gases, and P100)
Maintenance Requirements	No service required, only periodic inspection and cleaning
Shelf Life	Mask has an indefinite shelf life if properly stored, cartridges have an indefinite shelf life
Transportability	Fully transportable, can be carried on person in a belt mounted carrier
Operational Limitations	Product holds up well to type police/fire service/HAZMAT environments
Environmental Conditions	No different performance than other gas masks
Unit Cost	Masks \$64 on GSA, \$97 list Cartridges (pair) \$9.87 on GSA, \$14.95 list
Maintenance Cost	None
Warranty	Standard commercial warranty
Don/Doff Information	No, donning can be performed by the individual
Use/Reuse	Mask can be deconned, replacement of cartridges is recommended
Launderability	Item is laundered, with no deterioration
Accessories	Standard equipment includes a speaking diaphragm for clear, short-range communications, and noseclip to reduce lens fogging. Additional accessories: ESP voice projection unit, clear and tinted outsert lenses, spectacle kit, and carrier.

Special Requirements

Training Requirements	Training requires quantitative/qualitative fit testing and initial donning instruction (<15 min) and periodic training
Training Available	None, not that complicated
Manuals Available	User manual included with each mask
Surveillance Testing Requirements	Periodic inspection required
Support Equipment	Fit test equipment, lens outsert, butyl-coated nylon hood, and carrier
Testing Information	Available from MSA appears on data sheet 10-00-05
Applicable Regulations	None

WORKING DRAFT

Health Hazards	None
Communications Interface Capability	ESP communications system
EOD Compatibility	Not specified

WORKING DRAFT

General

Name

ID# 42

MSA Millennium Chemical-Biological Mask



Technology

A Hycar version of the reliable military-style gas mask. Gas Mask. Canister contains pleated HEPA filter to remove aerosols and solid particulates and an impregnated activated carbon bed to adsorb gases and liquid vapors.

Stock Number

Small: 10007423

Medium: 10007422

Large: 10007424

Protection Type

Respiratory

Equipment Category

Respirator, gas mask

Availability

Commercially available

Current User(s)

Multiple cities, State governments, Federal agencies, etc. Used by Air Force in Desert Storm.

Manufacturer

Mine Safety Appliances (MSA) Company

Defense Products Department

P.O. Box 428

Pittsburgh, PA 15230-0428

Manufacturer Type

Domestic

Developer

Mine Safety Appliances (MSA) Company

Source

Mine Safety Appliances (MSA) Company

POC: Evan K. Erickson

724-733-9274 (Tel)

724-733-8573 (Fax)

evan.erickson@msanet.com

Certification

NIOSH is currently evaluating this mask for protection against chloroacetophenone (CN), chlorobenzylidene (CS), P100 particulate efficiency level, and particulates

Operational Parameters

Chemical Warfare (CW)

Agents Protected Against

Full range of CW agents: GA, GD, VX, and Mustard; nerve, blister, and choking. Canister contains ASZM-TEDA carbon (same carbon as the C2A1 canister).

Biological Warfare (BW)

Agents Protected Against

All known biological agents. Prefilter has the same level of protection as the C2A1 canister.

Toxic Industrial Materials

(TIMs) Protected Against

CN, CS, P100 particulate efficiency level, and particulates. The canister has the same limitations as the C2A1, (i.e., not effective against ammonia).

Duration of Protection

Protection duration cannot be determined due to the indeterminable exposure

Recommended Use(s)

Riot control and response to terrorist incidents

WORKING DRAFT

Physical Parameters

Sizes Available	Small, medium, and large (adult) sizes available
Weight	1.6 lb
Package Size and Volume	10 in x 6 in x 6 in
Power Requirements	No power requirements for mask alone. ESP voice projection unit is available (requires a 9 V battery to operate)
Material Type	Mask is constructed of semi-permeable materials (a natural/nitrile blend of rubber and a polyurethane lens). Not recommended for exposure to flames or high heat.
Construction Type	Flexible, one-piece polyurethane lens with wide field of vision bonded to durable Hycar rubber facepiece
Color	Lens is clear, and the mask is black

Logistical Parameters

Ease of Use	Fully elastic, six-point head harness promotes easy on-off, easy adjustment, no hair pulling
Consumables	Cartridges are available with or without P100 (particulate protection): GMA P 100 Cartridge (organic vapor, and P100) GME P 100 Cartridge (organic vapor, acid gases, ammonia, methylamine, formaldehyde, hydrogen fluoride, and P100) GMB P 100 (acid gases, and P100) GMC P 100 (organic vapor, acid gases, and P100) GMD P 100 (ammonia, methylamine, and P100) Mersorb Cartridge P 100 Cartridge (chlorine, mercury vapor, and P100) R95 Prefilter and Cover (add to cartridge to achieve R95 rating)
Maintenance Requirements	No service required, only periodic inspection and cleaning
Shelf Life	Mask has an indefinite shelf life if properly stored, canister has a 4 yr shelf life
Transportability	Fully transportable, can be carried on person in a belt mounted carrier
Operational Limitations	Product holds up well to type police/fire service/HAZMAT environments
Environmental Conditions	No different performance than other gas masks
Unit Cost	Masks with one canister \$184 on GSA, \$297 list Canisters (box of 6) \$102 on GSA, \$210 list
Maintenance Cost	None
Warranty	Standard commercial warranty
Don/Doff Information	No, donning can be performed by the individual
Use/Reuse	Mask can be deconned, replacement of canister is recommended
Launderability	Item is laundered, with no deterioration
Accessories	Standard equipment includes a speaking diaphragm for clear, short-range communications, and noseclip to reduce lens fogging. Additional accessories: ESP voice projection unit, clear and tinted outsert lenses, spectacle kit, butyl hood, and carrier. Drinking tube.

Special Requirements

Training Requirements	Training requires quantitative/qualitative fit testing and initial donning instruction (<15 min) and periodic training.
Training Available	None, not that complicated.
Manuals Available	User manual included with each mask
Surveillance Testing Requirements	Periodic inspection required

WORKING DRAFT

Support Equipment

Fit test equipment, lens outsert, butyl-coated nylon hood, and carrier.
Internal nosecup with 2 check valves deflects air from the lens, reduces fogging. Standard mechanical speaking diaphragm included.

Testing Information

Available from MSA appears on data sheet 05-00-03

Applicable Regulations

None

Health Hazards

None

Communications Interface

ESP communications system

Capability**EOD Compatibility**

Not specified

WORKING DRAFT

General

Name

ID# 43

MSA OptimAir® MM 2K PAPR



Technology

The unit filters particulates and provides respirable air directly to the Ultravue or Ultra Elite Facepiece. Since it does not have a breathing tube, the unit is more compact than other PAPRs, enhancing user maneuverability and simplifying decontamination. OptimAir® MM 2K PAPR with Type HE OptiFilter® XL Cartridge is smaller, lighter, and less expensive, thanks largely to a new NiMH battery pack and dual-rate smart charger. The low-profile NiMH (nickel metal hydride) battery pack is lightweight (12.5 oz.), fits close to the body, and is small enough to fit in most pockets. The battery provides 8 h of continuous use, lasting a full work shift. Another benefit is that NiMH batteries do not have a “memory effect” like NiCad batteries. The sealed, water-resistant battery pack is designed for easy shower decontamination. The dual-rate smart charger is a standard accessory with this unit. The charger can recharge a battery in less than 3 h. An LED indicates battery condition: fast charge, fully charged, or battery fault. The lightweight, compact design of the OptimAir MM 2K PAPR is well suited for abatement, nuclear, and other industries with hazardous particulate environments. The water-resistant filter has an optional prefilter and cover. Complete units include motor/blower, NiMH battery, dual-rate charger, one Type HE OptiFilter XL Cartridge, urethane-coated nylon web belt, and choice of Ultravue or Ultra Elite Facepiece. The “2K PAPR” is a direct replacement for the OptimAir MM PAPR.

Stock Number

10023569

Protection Type

Respiratory

Equipment Category

PAPR/cartridge

Availability

Commercially available

Current User(s)

Asbestos abatement, chemical, electric utility, nuclear, paper and pulp, sanding and grinding, and welding

Manufacturer

Mine Safety Appliances (MSA) Company
Defense Products Department
P.O. Box 428
Pittsburgh, PA 15230-0428

Manufacturer Type

Domestic

Developer

Mine Safety Appliances (MSA) Company

Source

Mine Safety Appliances (MSA) Company
POC: Evan K. Erickson
724-733-9274 (Tel)
724-733-8573 (Fax)
evan.erickson@msanet.com

Certification

Approvals and standards
Various NIOSH approval numbers based on facepiece or hood style

WORKING DRAFT

Operational Parameters

**Chemical Warfare (CW)
Agents Protected Against
Biological Warfare (BW)
Agents Protected Against
Toxic Industrial Materials
(TIMs) Protected Against
Duration of Protection
Recommended Use(s)**

GMA-H cartridge

P100 particulate filter

Particulate and dust, toxic atmosphere non-IDLH, and welding

8 h
Designed to filter contaminants from ambient air and provide constant air flow to facepiece

Physical Parameters

**Sizes Available
Weight
Package Size and Volume
Power Requirements

Material Type
Construction Type

Color**

Three sizes
< 4 lb
1 ft³
NiMH battery, dual-rate charger; low-profile NiMH (nickel metal hydride) battery pack is lightweight (12.5 oz)
Ultravue facepiece, medium, black, and Hycar rubber
Rubber facepiece with polycarbonate lens, mask mounted blower and cartridge, and belt mounted battery pack
Lens is clear

Logistical Parameters

**Ease of Use
Consumables

Maintenance Requirements
Shelf Life
Transportability
Operational Limitations
Environmental Conditions
Unit Cost
Maintenance Cost
Warranty
Don/Doff Information
Use/Reuse
Launderability
Accessories**

Easy adjustment
Combination of cartridges for protection against particulates, toxic gases and vapors, or a combination of these hazards

Maintenance-free lithium battery

5 yr
Fully transportable
Product holds up well in police/HAZMAT type environments

Typical respirator
\$326 GSA, \$494 list
None
Standard commercial warranty
No, donning can be performed by the individual
Can be deconned, canister replacement recommended
Easy shower decontamination
Complete units include motor/blower, NiMH battery, dual-rate charger, one type HE OptiFilter XL cartridge, urethane-coated nylon web belt, and choice of Ultravue or Ultra Elite facepiece

Special Requirements

**Training Requirements
Training Available
Manuals Available

Surveillance Testing
Requirements
Support Equipment
Testing Information**

Minimal
Video tape
Manuals included with product

Periodic inspection

Protective covers
Data sheet available from MSA

WORKING DRAFT

Applicable Regulations	NIOSH-approved
Health Hazards	None
Communications Interface	None
Capability	
EOD Compatibility	Not specified

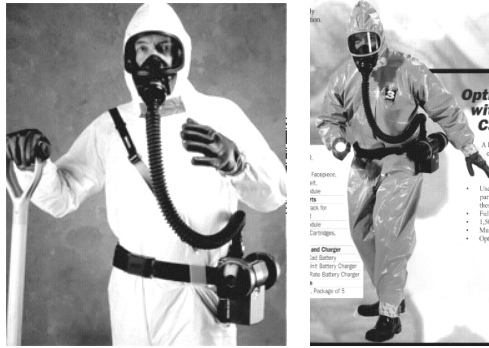
WORKING DRAFT

General

Name

ID# 44

MSA OptimAir® 6A PAPR with OptiFilter Cartridges



Technology

The OptimAir 6A PAPR provides respiratory protection by filtering contaminants from ambient air and providing a constant air flow to either a facepiece or hood (with CBA/RCA or HEPA filters) at a rate equal to or exceeding NIOSH standards. Can be used with an entire family of filters, chemical cartridges and combination cartridges for protection against particulates, toxic gases and vapors or a combination of these hazards. It requires two filters. The unit is available with full- or half-mask facepieces, or hood. The belt-mounted motor/blower assembly includes a highly efficient 4.6 V motor that has a long service life. The motor/blower assembly features threaded connectors for quick and easy attachment of OptiFilter Cartridges.

Stock Number

00749: OptimAir 6A PAPR with medium, black hycar comfo half-mask facepiece

800767: OptimAir 6A PAPR with medium, black hycar comfo welder's half-mask

1001890: CBA/RCA canisters

Respiratory

PAPR, with HEPA filters

Commercially available

Protection Type

Equipment Category

Availability

Current User(s)

Asbestos abatement, chemical, electric utility, hazardous materials, nuclear, oil and gas, paper and pulp, and sanding and grinding

Manufacturer

Mine Safety Appliances (MSA) Company

Defense Products Department

P.O. Box 428

Pittsburgh, PA 15230-0428

Domestic

Manufacturer Type

Developer

Mine Safety Appliances (MSA) Company

Source

Mine Safety Appliances (MSA) Company

POC: Evan K. Erickson

724-733-9274 (Tel)

724-733-8573 (Fax)

evan.erickson@msanet.com

Certification

The OptimAir 6A Powered Air-Purifying Respirator with Ultravue, Comfo Elite, or Comfo Welder's Facepieces or Tyvek Hood has approvals from the National Institute for Occupational Safety and Health (NIOSH) and Mine Safety and Health Administration (MSHA). Filters and cartridges are covered by separate approval. Cartridges must be replaced whenever air flow drops below 4 cubic ft per min (115 lpm) with tight-fitting facepieces or 6 cubic ft per min (170 lpm) with the Tyvek hood, or when the user smells or tastes the contaminant.

WORKING DRAFT

Operational Parameters

Chemical Warfare (CW) Agents Protected Against

Effective against biological agents and chemical agents: GA, GD, VX, Mustard, and Lewisite. Full range of CW agents; nerve, blister, and choking. Canister contains ASZM-TEDA carbon (same carbon as the C2A1 canister).

Biological Warfare (BW) Agents Protected Against Toxic Industrial Materials (TIMs) Protected Against Duration of Protection

All known biological agents. Prefilter has the same level of protection as the C2A1 canister.

Particulate and dust, toxic atmosphere non-IDLH, and welding

Recommended Use(s)

Protection duration cannot be determined due to the indeterminable exposure

Designed to filter contaminants from ambient air and provide constant air flow to facepiece

Physical Parameters

Sizes Available

Full-face Hycar rubber Ultravue Facepiece in three sizes

Weight

8 lb

Package Size and Volume

1.5 ft³

Power Requirements

1500 h brush-type motor in a motor/blower module; lithium battery; operational battery, and charger

Material Type

Ultravue facepiece, medium, black, and Hycar rubber

Construction Type

Rubber mask with lens, rubber breathing tube, and belt mounted blower/cartridges

Color

Lens is clear

Logistical Parameters

Ease of Use

Fully elastic, six-point head harness promotes easy on-off, easy adjustment, no hair pulling. Dual-canister mount allows weapon sighting from either shoulder. Standard nose cup helps eliminate lens fogging.

Consumables

Combination of cartridges for protection against particulates, toxic gases and vapors, or a combination of these hazards

Maintenance Requirements

Maintenance-free lithium battery

Shelf Life

Maintenance free lithium battery with 10 yr shelf life

Transportability

Fully transportable

Operational Limitations

Product holds up well to type police/fire service/HAZMAT environments

Environmental Conditions

No different performance than other gas masks

Unit Cost

OptimAir 6A PAPR—\$445 GSA, \$674 list

Maintenance Cost

None

Warranty

Standard commercial warranty

Don/DoFF Information

No, donning can be performed by the individual

Use/Reuse

Mask can be deconned, and replacement of canister is recommended

Launderability

Item is laundered, with no deterioration

Accessories

Tyvek hood shell, less Simple Hood Suspension 488721

Battery pack 491120

OptimAir 6A PAPR with Tyvek hood, two Type H OptiFilter XL

Cartridges, motor/blower, battery, belt, and battery charger 49130,

Polyurethane-coated Nylon-Web Belt 492827

Air-purifying Respirator with Ultravue Facepiece, lithium battery, belt, and motor/blower module

WORKING DRAFT

Special Requirements

Training Requirements	Training requires quantitative/qualitative fit testing and initial donning instruction (<15 min) and periodic training
Training Available	None, not that complicated
Manuals Available	User manual included with each mask
Surveillance Testing Requirements	Periodic inspection
Support Equipment	Protective covers, facepiece, motor/blower, battery, belt, and battery charger
Testing Information	Data sheet available from MSA
Applicable Regulations	None
Health Hazards	None
Communications Interface Capability	None
EOD Compatibility	Not specified

WORKING DRAFT

General

Name

ID# 45

MSA Phalanx CBA/RCA Gas Mask



Technology

Canister contains pleated HEPA filter to remove aerosols and solid particulates and an impregnated activated carbon bed to adsorb gases and liquid vapors. The Phalanx facepiece has canister inlet ports on both sides of facepiece.

Stock Number

Small: 487330

Medium: 487329

Large: 487331

Protection Type

Respiratory

Equipment Category

Gas Mask

Availability

Product is in production

Current User(s)

Multiple cities, State governments, Federal agencies, etc.

Manufacturer

Mine Safety Appliances (MSA) Company

Defense Products Department

P.O. Box 428

Pittsburgh, PA 15230-0428

Domestic

Manufacturer Type

Developer

Mine Safety Appliances (MSA) Company

Source

Mine Safety Appliances (MSA) Company

POC: Evan K. Erickson

724-733-9274 (Tel)

724-733-8573 (Fax)

evan.erickson@msanet.com

Certification

Product is NIOSH-approved (No. TC-14G-0236) for chlorobenzylidene (CS) and chloracetophenone (CN) tear gasses, P100 particulate efficiency level, and particulates

Operational Parameters

Chemical Warfare (CW)

Agents Protected Against

Full range of CW agents; GA, CB (Sarin), GD, VX, Mustard, and Lewisite. Canister contains ASZM-TEDA carbon (same carbon as the C2A1 canister).

Biological Warfare (BW)

Agents Protected Against

All known BW agents. Prefilter has the same level of protection as the C2A1 canister.

Toxic Industrial Materials (TIMs) Protected Against

Toxic Atmosphere non-IDLH

The canister has the same limitations as the C2A1, (i.e., not effective against ammonia)

Duration of Protection

Protection duration cannot be determined due to the indeterminable exposure

Recommended Use(s)

Protection against riot control agents. Phalanx CBA-RCA (Chemical/Biological Agent-Riot Control Agent) Gas Masks from MSA are specifically designed for use by law enforcement and emergency response personnel.

WORKING DRAFT

Physical Parameters

Sizes Available

Small, medium, and large (adult) sizes available

Weight

1.6 lb

Package Size and Volume

10 in x 6 in x 6 in

Power Requirements

No power requirements for mask alone. ESP voice projection unit is available (requires a 9 V battery to operate).

Material Type

Gas Masks are molded from black Hycar rubber, a specially formulated combination of natural rubber and synthetic materials. The facepiece is soft and pliable for a snug, comfortable fit. Hycar resists chemical attack and temperature extremes and is able to withstand rugged daily use. Hycar is particularly resistant to permeation against chemical warfare agents. The lens is made of polycarbonate and is coated on both sides to resist scratching and chemical attack. The facepiece has a wraparound design to minimize dead-air space and to provide good vision.

Construction Type

The lens is mechanically fastened to the mask

Color

Lens is clear, and the mask is black

Logistical Parameters

Ease of Use

EZ-Don Facepiece Harness provides quick, simple facepiece donning. A quick tug on the bottom two straps secures a snug fit. The Phalanx has been used by police forces across the nation for more than 20 yr. Minimal incompatibilities have been reported.

Consumables

Cartridges are available with or without P100 (particulate protection):
GMA P 100 Cartridge (Organic vapor, and P100)
GME P 100 Cartridge (Organic vapor, acid gases, ammonia, methylamine, formaldehyde, hydrogen fluoride, and P100)
GMB P 100 (acid gases, and P100)
GMC P 100 (organic vapor, acid gases, and P100)
GMD P 100 (ammonia, methylamine, and P100)
Mersorb cartridge P 100 cartridge (chlorine, mercury vapor, P100)
R95 prefilter and cover (add to cartridge to achieve R95 rating)
No service required, only periodic inspection and cleaning. Can be easily disassembled for cleaning and parts replacement.

Maintenance Requirements

Shelf Life

Mask has an indefinite shelf life if properly stored, canister has a 4 yr shelf life

Transportability

Fully transportable, can be carried on person in a belt mounted carrier

Operational Limitations

Product holds up well to type police/fire service/HAZMAT environments

Environmental Conditions

No different performance than other gas masks. No considerations.

Unit Cost

Masks with one canister \$134 on GSA, \$203 list

Canisters (box of 6) \$136 on GSA, \$220 list

Maintenance Cost

None

Warranty

Standard commercial warranty

Don/Doff Information

No, donning can be performed by the individual

Use/Reuse

Mask can be deconned, replacement of canister is recommended

Launderability

Item is laundered, with no deterioration

Accessories

Additional accessories: Replacement nose cups, cover lenses, MSA cleaner, replacement ID tag with cable tie, butyl-coated nylon hood, and carrier. ESP voice projection unit, clear and tinted outsert lenses, spectacle kit, butyl hood, and carrier.

Special Requirements

Training Requirements

Training requires quantitative/qualitative fit testing and initial donning instruction (<15 min) and periodic training

Training Available

None, not that complicated

WORKING DRAFT

Manuals Available	User manual included with each mask
Surveillance Testing Requirements	Periodic inspection
Support Equipment	Fit test equipment
Testing Information	Available from MSA appears on data sheet 05-01-03
Applicable Regulations	None
Health Hazards	None
Communications Interface Capability	The facepiece adapts to optional ESP communications system
EOD Compatibility	Not specified

WORKING DRAFT

General

Name

ID# 46

MSA PremAire™ XV Supplied Air Respirator



Technology

The respirator is a combination respirator that can be used as a versatile airline respirator with emergency escape capability or as a stand-alone SCBA. The respirator features a high-performance mask-mounted regulator and a pair of compact, waist-mounted air cylinders. Vortex tube body cooling and warming capability. U.S. Patent No. 5,017,807. 496780

Stock Number

Protection Type

Equipment Category

Respiratory

Combination respirator that can be stand-alone (SCBA) or airline with emergency escape capability

813729: PremAire XV Cadet Respirator complete with medium SoftFeel Rubber Ultra Elite Facepiece

813760: PremAire XV System Respirator complete with PremAire System Manifold and Medium SoftFeel Rubber Ultra Elite Facepiece

Commercially available

Availability

Current User(s)

Not specified

Manufacturer

Mine Safety Appliances (MSA) Company

Defense Products Department

P.O. Box 428

Pittsburgh, PA 15230-0428

Domestic

Manufacturer Type

Developer

Mine Safety Appliances (MSA) Company

Source

Mine Safety Appliances (MSA) Company

POC: Evan K. Erickson

724-733-9274 (Tel)

724-733-8573 (Fax)

evan.erickson@msanet.com

Certification

Approvals and Standards

NIOSH/MSHA-approved. The self-contained air-supply is approved for entry into and escape from IDLH atmospheres.

Operational Parameters

Chemical Warfare (CW)

Supplied air respirator

Agents Protected Against

Biological Warfare (BW)

Supplied air respirator

Agents Protected Against

Toxic Industrial Materials

Toxic atmosphere IDLH

(TIMs) Protected Against

WORKING DRAFT

Duration of Protection

Combines the best features of an advanced, air-supplied respirator with those of a 15 min SCBA.

Vortex tube body cooling and warming capability. U.S. Patent No. 5,017,807.

Recommended Use(s)

Agriculture, chemical, electric utility, hazardous materials, and paper and pulp industries

Physical Parameters

Sizes Available

Small, medium, and large facepiece

Weight

< 10 lb

Package Size and Volume

15 in x 12 in x 6 in

Power Requirements

None

Material Type

Not specified

Construction Type

Rubber mask with belt mounted cylinder/airline

Color

Black facepiece

Logistical Parameters

Ease of Use

Requires fit testing (15 min) and initial donning instruction

Consumables

Air cylinder must be refilled

Maintenance Requirements

Unopened, 6 mo

Shelf Life

5 yr

Transportability

Easily transported

Operational Limitations

Product holds up well to police/fire/HAZMAT environments

Environmental Conditions

None

Unit Cost

\$389 GSA; \$589 list

Maintenance Cost

None

Warranty

Standard commercial warranty

Don/DoFF Information

No, donning can be performed by the individual

Use/Reuse

Can be decontaminated

Launderability

Can be laundered

Accessories

Composite cylinders and coated-nylon carrier assembly

Special Requirements

Training Requirements

15 min for fit testing and initial donning instruction

Training Available

Video

Manuals Available

Included with product

Surveillance Testing

Periodic inspection required

Requirements

Support Equipment

Fit test equipment

Testing Information

Appears in MSA bulletin

Applicable Regulations

None

Health Hazards

None

Communications Interface

ESP communications system

Capability

EOD Compatibility

Not specified

WORKING DRAFT

General

Name

ID# 47

MSA RescueAire™ II Portable Air-Supply System



Technology

The RescueAire II Portable Air-Supply System is designed to meet the needs of Rapid Intervention Teams (RITs). The system consists of a lightweight Stealth™ carbon cylinder, a Quick-Fill® emergency breathing system (EBS), an ExtendAire™ emergency breathing system, and an MMR regulator, supported by a heat- and flame-resistant carrying harness (made from Nomex and Kevlar materials). The RescueAire System allows firefighters to provide emergency breathing air for almost any victim quickly and easily. The Quick-Fill EBS allows users to refill and transfill air cylinders while the SCBA is worn, even in IDLH atmospheres. The ExtendAire System can be used both as an EBS and as a dual-purpose device for MMR SCBA to allow firefighters to connect to an air line. Built for the extreme conditions required by the Fire Service, the RescueAire II System is available in both low-pressure (2216 psig) and high-pressure (4500 psig) versions. An optional-use shoulder strap provides for hands-free carrying.

Stock Number

813729

813760

Protection Type

Respiratory

Equipment Category

SCBA, can be used as a dual-purpose device for MMR SCBA or to connect to an airline

813729: PremAire XV Cadet Respirator complete with medium SoftFeel Rubber Ultra Elite Facepiece

813760: PremAire XV System Respirator complete with PremAire System Manifold and Medium SoftFeel Rubber Ultra Elite Facepiece

Commercially available

Availability

Current User(s)

Fire Fighters

Manufacturer

Mine Safety Appliances (MSA) Company

Defense Products Department

P.O. Box 428

Pittsburgh, PA 15230-0428

Domestic

Manufacturer Type

Developer

Mine Safety Appliances (MSA) Company

Source

Mine Safety Appliances (MSA) Company

POC: Evan K. Erickson

724-733-9274 (Tel)

724-733-8573 (Fax)

evan.erickson@msanet.com

Certification

Approvals and Standards

NIOSH/MSHA-approved. The self-contained air-supply is approved for entry into and escape from IDLH atmospheres.

WORKING DRAFT

Operational Parameters

Chemical Warfare (CW) Agents Protected Against Biological Warfare (BW) Agents Protected Against Toxic Industrial Materials (TIMs) Protected Against Duration of Protection	Supplied air respirator Supplied air respirator Combustible atmosphere, confined space, fire, oxygen deficiency, and toxic atmosphere IDLH 60 min
Recommended Use(s)	Built for the extreme conditions required by the Fire Service, the RescueAire II System is available in both low-pressure (2216 psig) and high-pressure (4500 psig) versions. An optional-use shoulder strap provides for hands-free carrying.

Physical Parameters

Sizes Available	60 min cylinder
Weight	12 lb
Package Size and Volume	10 in x 10 in x 24 in
Power Requirements	None
Material Type	Carbon fiber composite
Construction Type	Carbon fiber composite
Color	Natural

Logistical Parameters

Ease of Use	SCBA training required
Consumables	Cylinder must be refilled
Maintenance Requirements	None
Shelf Life	15 yr
Transportability	Easily transported
Operational Limitations	Product holds up well in all environments
Environmental Conditions	None
Unit Cost	Not specified
Maintenance Cost	None
Warranty	Standard commercial warranty
Don/Doff Information	None
Use/Reuse	Refillable
Launderability	Can be decontaminated
Accessories	Composite cylinders and coated-nylon carrier assembly

Special Requirements

Training Requirements	SCBA training required
Training Available	Video
Manuals Available	Included with product
Surveillance Testing Requirements	Periodic inspection required
Support Equipment	None
Testing Information	Data sheet available from MSA

WORKING DRAFT

Applicable Regulations	None
Health Hazards	None
Communications Interface	None
Capability	
EOD Compatibility	Not specified

WORKING DRAFT

General

Name

ID# 48

MSA Ultra-Twin® Respirators



Technology

The Ultra-Twin Full-Facepiece Respirator has an in-turned lip around the edge for a tight seal against the face. A large chin cup makes it easy to position. Five suspension headstraps and roller buckles hold the facepiece in place while minimizing hair entanglement. Wide polycarbonate lens is coated to resist scratching and chemical attack. Lens is held in place by a two-piece lens ring, which is color-coded to indicate the size of the facepiece. Uses the full line of Comfo Cartridges and filters.

471298

Stock Number

Protection Type

Respiratory

Equipment Category

Respirator

Availability

Commercially available

Current User(s)

Not specified

Manufacturer

Mine Safety Appliances (MSA) Company

Defense Products Department

P.O. Box 428

Pittsburgh, PA 15230-0428

Domestic

Manufacturer Type

Mine Safety Appliances (MSA) Company

Developer

Mine Safety Appliances (MSA) Company

Source

POC: Evan K. Erickson

724-733-9274 (Tel)

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evan.erickson@msanet.com

NIOSH-approved for industrial chemicals

Certification

Operational Parameters

Chemical Warfare (CW)

Effective against nerve and blister agent groups. Tested using the CASHPAC protocol.

Agents Protected Against

Biological Warfare (BW)

All known biological agents. Prefilter has the same level of protection as the C2A1 canister.

Agents Protected Against

Toxic Industrial Materials

Ammonia, formaldehyde, hydrogen fluoride, formaldehyde, and chlorine

(TIMs) Protected Against

Duration of Protection

Exceeds the 8 h requirements of the NIOSH protocols

Recommended Use(s)

Protection against TIMs

WORKING DRAFT

Physical Parameters

Sizes Available	Small, medium, and large sizes
Weight	2 lb
Package Size and Volume	10 in x 6 in x 6 in
Power Requirements	None
Material Type	Mask is rubber, lens polycarbonate
Construction Type	Mechanical assembly
Color	Black with clear lens

Logistical Parameters

Ease of Use	Comfort, and freedom of movement
Consumables	Cartridges are available with or without P100 (particulate protection): GMA P 100 Cartridge (organic vapor, and P100) GME P 100 Cartridge (organic vapor, acid gases, ammonia, methylamine, formaldehyde, hydrogen fluoride, and P100) GMB P 100 (acid gases, and P100) GMC P 100 (organic vapor, acid gases, and P100) GMD P 100 (ammonia, methylamine, and P100) Mersorb Cartridge P 100 Cartridge (chlorine, mercury vapor, and P100) R95 prefilter and cover (add to cartridge to achieve R95 rating)
Maintenance Requirements	No service required, only periodic inspection and cleaning
Shelf Life	Mask has an indefinite shelf life if properly stored, cartridges have an indefinite shelf life
Transportability	Fully transportable, can be carried on person in a belt mounted carrier
Operational Limitations	Product holds up well to type police/fire service/HAZMAT environments
Environmental Conditions	No different performance than other gas masks
Unit Cost	Masks \$125 on GSA, \$189 list
Maintenance Cost	None
Warranty	Standard commercial warranty
Don/DoFF Information	No, donning can be performed by the individual
Use/Reuse	Mask can be deconned, replacement of cartridges is recommended
Launderability	Item can be laundered, with no deterioration
Accessories	Standard equipment includes a speaking diaphragm for clear, short-range communications, and nose cup to reduce lens fogging. Additional accessories: ESP voice projection unit, clear and tinted outsert lenses, spectacle kit, and carrier.

Special Requirements

Training Requirements	Raining requires quantitative/qualitative fit testing and initial donning instruction (<15 min) and periodic training
Training Available	None, not that complicated
Manuals Available	User manual included with each mask
Surveillance Testing Requirements	Periodic inspection required
Support Equipment	Fit test equipment, lens outsert, butyl-coated nylon hood, and carrier
Testing Information	Appears in MSA bulletin
Applicable Regulations	None
Health Hazards	None

WORKING DRAFT

Communications Interface	ESP communications system
Capability	
EOD Compatibility	Not specified

WORKING DRAFT

General

Name

ID# 49

MSA MCU-2/P and MCU-2A/P Series



Technology
Stock Number

Respirator/Mask; EOD protection when worn with HGU-65/P hood

MSA:

Small - 306762

Medium - 306763

Large - 306764

Government:

Small - 4240-01-327-3299

Medium - 4240-01-327-3300

Large - 4240-01-327-3301

Respiratory

Protection Type
Equipment Category
Availability

Respirator, mask, and EOD protection

Military

Current User(s)

U.S. Air Force general purpose respirator. Also by FBI, Secret Service, Drug Enforcement Agency, Coast Guard, Department of Energy, and Navy

Manufacturer

Mine Safety Appliances (MSA) Company
Defense Products Department
P.O. Box 428
Pittsburgh, PA 15230-0428

Manufacturer Type

Domestic

Developer

Mine Safety Appliances (MSA) Company

Source

Worldwide NBC Mask Handbook
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Certification

Canister mount

Operational Parameters

Chemical Warfare (CW)
Agents Protected Against
Biological Warfare (BW)
Agents Protected Against
Toxic Industrial Materials
(TIMs) Protected Against
Duration of Protection
Recommended Use(s)

Exceeds the required protection factor of 10(4). Protects the wearer from chemical and biological agents and radioactive dust.

Exceeds the required protection factor of 10(4). Protects the wearer from chemical and biological agents and radioactive dust.

Limitations of C2A1

Cannot predict, level of toxins determine duration

Riot control, chemical agent, and biological agent

WORKING DRAFT

Physical Parameters

Sizes Available	Small, medium, and large
Weight	27 oz (facepiece and canister) 10 oz (canister) 18 oz (mask)
Package Size and Volume	10 in x 6 in x 6 in
Power Requirements	None
Material Type	Molded silicone rubber facepiece material with polyurethane one-piece panoramic lens bonded to it
Construction Type	Component(s): Drinking device, eyepiece(s) made of clear molded urethane and bonded to facepiece; facepiece (molded silicone rubber); head harness (six-point suspension); and nosecup
Color	Grey

Logistical Parameters

Ease of Use	Field of vision: Excellent optical properties including an enhanced peripheral field
Consumables	C2 canister or any other NATO standard thread canister
Maintenance Requirements	None
Shelf Life	Indefinite shelf life
Transportability	Fully transportable, can be carried on person in a belt mounted carrier
Operational Limitations	Product holds up well to type police/fire service/HAZMAT environments
Environmental Conditions	No different performance than other gas masks
Unit Cost	Mask \$195; kit \$300
Maintenance Cost	None
Warranty	Not specified
Don/Doff Information	Less than 9 s, an additional 6 s to don/adjust the hood
Use/Reuse	Mask can be deconned, replacement of canister is recommended
Launderability	Item can be laundered, with no deterioration
Accessories	Includes three C2 canisters: carrier (mildew-resistant nylon bag with pockets); hood(s) made of butyl rubber-coated nylon cloth; outserts (one optically clear and one tinted, both made of polycarbonate shell that can protect the wearer from chemical droplets and POLs); waterproof bag (to protect mask from moisture in wet and damp climates)

Special Requirements

Training Requirements	Required
Training Available	Not specified
Manuals Available	Not specified
Surveillance Testing Requirements	Periodic inspection required
Support Equipment	Fit test equipment; lens outsert; butyl-coated nylon hood; carrier
Testing Information	Available from MSA and appears on data sheet 05-00-03
Applicable Regulations	None
Health Hazards	None

WORKING DRAFT

Communications Interface

ESP communications system

Capability

EOD Compatibility

EOD protection when worn with HGU-65/P hood

WORKING DRAFT

General

Name

MSA MMR Xtreme® Air Mask

ID# 50



Technology

MMR Xtreme Air Masks are pressure-demand apparatus, designed to maintain a slight positive air pressure inside the facepiece during inhalation and exhalation. This helps prevent contaminants from seeping in around the facepiece, even if there are small breaks in the face-to-facepiece seal. Sleek, rugged and lightweight, the MMR Xtreme Air Mask is the future of self-contained breathing apparatus (SCBA). Comfortable, wide-vision Ultra Elite facepiece and clean, low profile mask-mounted regulator with large shutoff button. High-strength yet lightweight cylinder options and advanced Black Rhino or Vulcan carrier/harness assembly. MMR Xtreme Air Masks are the superior options available on the Ultralite and Custom 4500 MMR Air Masks.

Stock Number

Several models available. All have medium black hycal ultra elite facepiece, 30 min rated stealth cylinder, vulcan carrier with lumbar pad and chest strap, and without case.

10018584: Ultralite MMR Xtreme Air Mask, and DragonFly IP with heat sensor

10018585: Ultralite MMR Xtreme Air Mask, quick-fill system, and DragonFly IP with heat sensor

10018586: Custom 4500 MMR Xtreme Air Mask, and DragonFly IP with heat sensor

10018587: Custom 4500 MMR Xtreme Air Mask, quick-fill system, and DragonFly IP with heat sensor

10024214 : Ultralite MMR Xtreme Air Mask, and ICM 2000 with heat sensor

10024215: Ultralite MMR Xtreme Air Mask, and ICM 2000 Plus with heat sensor

10024216: Custom 4500 MMR Xtreme Air Mask, and ICM 2000 with heat sensor

10024217: Custom 4500 MMR Xtreme Air Mask, and ICM 2000 Plus with heat sensor

10024218: Custom 4500 MMR Xtreme Air Mask, quick-fill system, and ICM 2000 Plus with heat sensor

Protection Type

Respiratory

Equipment Category

SCBA, pressure-demand to maintain slight positive air pressure

Availability

Commercially available

Current User(s)

Fire fighters across the country

Manufacturer

Mine Safety Appliances (MSA) Company

Defense Products Department

P.O. Box 428

Pittsburgh, PA 15230-0428

WORKING DRAFT

Manufacturer Type

Domestic

Developer

Mine Safety Appliances (MSA) Company

Source

Internet

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Certification

The MMR Xtreme Air Masks comply with the performance requirements of the American National Standards Institute (ANSI) and the National Fire Protection Association (NFPA) ANSI/NFPA-1981 Standard for Open-circuit SCBA, 1997 Edition. They are certified by the National Institute for Occupational Safety and Health (NIOSH).

Operational Parameters

Chemical Warfare (CW)

Supplied air respirator

Agents Protected Against

Biological Warfare (BW)

Supplied air respirator

Agents Protected Against

Toxic Industrial Materials

Confined space, fire, oxygen deficiency, toxic atmosphere IDLH, chemical, electric utility, fire fighting, nuclear, oil, and gas

(TIMs) Protected Against

Duration of Protection

Dependent of cylinder refill capability

Recommended Use(s)

All environments

Physical Parameters

Sizes Available

Small, medium, and large facepieces; 30 min, 45 min, and 60 min air cylinders

Weight

20 lb to 30 lb

Package Size and Volume

< 2 ft³

Power Requirements

None

Material Type

Rubber mask

Construction Type

Typical

Color

Black mask

Logistical Parameters

Ease of Use

Typical SCBA

Consumables

Cylinder must be refilled

Maintenance Requirements

Periodic service and calibration

Shelf Life

5 yr to 15 yr

Transportability

Fully transportable

Operational Limitations

Designed for police/firefighters/HAZMAT environments

Environmental Conditions

Full range of environments

Unit Cost

P/N 10018584 \$2.5K GSA, \$4.1K list

Maintenance Cost

Prices vary depending on options selected

Warranty

Dependent on use

Don/Doff Information

Standard commercial warranty

Use/Reuse

No, donning can be performed by the individual

Laundryability

Can be decontaminated

Accessories

Item can be laundered with no deterioration

Refer to MSA data sheet

WORKING DRAFT

Special Requirements

Training Requirements	Initial training, and fit testing required
Training Available	Video
Manuals Available	Included with product
Surveillance Testing Requirements	Periodic inspection required
Support Equipment	None
Testing Information	Refer to MSA data sheet
Applicable Regulations	None
Health Hazards	None
Communications Interface Capability	ESP R1 system
EOD Compatibility	Fits under EOD hoods/suits